

### **AMENDMENTS TO THE CLAIMS**

*The listing of claims will replace all prior versions and listings of claims in the application:*

#### **Listing of Claims:**

1. **(Currently Amended)** An optical device comprising:

a housing;

at least one optical subassembly substantially disposed within the housing and defining a longitudinal axis, the at least one optical subassembly including a plurality of electrical connections;

an optoelectronic component mounted within the optical subassembly and in communication with at least one of the electrical connections of the at least one optical subassembly;

a substrate substantially disposed within the housing and residing in a plane that is substantially perpendicular to the longitudinal axis defined by the at least one optical subassembly, the substrate including electronic circuitry, and the substrate including a plurality of electrical connections, each of which is configured to interface with a corresponding electrical connection of the at least one optical subassembly, each of the at least one optical subassembly being both electrically and mechanically coupled to the substrate by the plurality of electrical connections of the at least one optical subassembly;  
and

a connector disposed on one end of the substrate and mounted on a surface of the substrate within the plane that is substantially perpendicular to the longitudinal axis.

2. **(Original)** The optical device as recited in claim 1, wherein the at least one optical subassembly comprises at least one of: a transmit optical subassembly and a receive optical subassembly.

3. **(Previously Presented)** The optical device as recited in claim 1, wherein the connector is in electrical communication with at least some of the electronic circuitry of the substrate.

4. **(Original)** The optical device as recited in claim 3, wherein the substrate is configured to connect to a host bus adapter.

5. **(Original)** The optical device as recited in claim 1, wherein the at least one optical subassembly is mechanically and electrically connected to the substrate.

6. **(Currently Amended)** An optoelectronic interface device suitable for use in implementing an optical connection to a host device, comprising:

a host bus adapter having a printed circuit board with at least one connector for electrically interfacing with the host device; and

an optical transceiver configured to mechanically and electrically interface with the host bus adapter and comprising:

a housing;

a transmit optical subassembly and a receive optical subassembly substantially disposed within the housing, each optical subassembly defining a corresponding longitudinal axis, an optical transmitter being mounted within the transmit optical subassembly and an optical receiver being mounted within the receive optical subassembly;

a transceiver substrate substantially disposed within the housing and residing in a plane that is substantially perpendicular to the longitudinal axes respectively defined by the transmit optical subassembly and the receive optical subassembly, wherein the transmit optical subassembly and receive optical subassembly are mounted upon the transceiver substrate by electrical connections, the electrical connections securing the transmit optical subassembly and receive optical subassembly to the substrate, the transceiver substrate including electronic circuitry; and

a connector located on an end of the transceiver substrate, the connector mounted on a surface of the transceiver substrate in the plane that is substantially perpendicular to the longitudinal axes.

7. **(Original)** The optoelectronic interface device as recited in claim 6, wherein the optoelectronic interface device is configured to be substantially received within a standard slot of the host device.

8. **(Original)** The optoelectronic interface device as recited in claim 7, wherein the standard slot comprises one of: a PCI card slot; and a PCMCIA card slot.

9. **(Original)** The optoelectronic interface device as recited in claim 6, wherein the host bus adapter comprises a printed circuit board for one of: a peripheral component interconnect card; and, a PCMCIA card.

10. **(Original)** The optoelectronic interface device as recited in claim 6, further comprising a face plate defining cutouts and being attached, at least indirectly, to at least one of: the optical transceiver; and, the host bus adapter.

11. **(Original)** The optoelectronic interface device as recited in claim 10, wherein the faceplate includes at least one status indicator.

12. **(Currently Amended)** An optical transceiver comprising:

a housing;

a transmit optical subassembly substantially disposed within the housing and defining a longitudinal axis, an optical transmitter being mounted within the transmit optical subassembly;

a receive optical subassembly substantially disposed within the housing and defining a longitudinal axis, an optical receiver being mounted within the receive optical subassembly;

a transceiver substrate substantially disposed within the housing and residing in a plane that is substantially perpendicular to the longitudinal axes respectively defined by the transmit optical subassembly and the receive optical subassembly, the transceiver substrate including electronic circuitry, and the transceiver substrate being physically and electrically connected to the transmit optical subassembly and the receive optical subassembly by respective electrical connections of the transmit optical subassembly and the receive optical subassembly; and

a connector connected to the transceiver substrate, the connector mounted at a surface of the transceiver substrate in the plane, wherein the connector electrically and mechanically connects the transceiver substrate with a host bus adapter.

13. **(Original)** The optical transceiver as recited in claim 12, wherein the optical transceiver is suitable for use in connection with data rates at least as high as about 10 Gbps.

14. **(Previously Presented)** The optical transceiver as recited in claim 12, wherein the connector is configured to interface with a host bus adapter at an edge of the host bus adapter.

15. **(Original)** The optical transceiver as recited in claim 12, wherein the substrate includes a connector configured to interface with one of: a PCI card; and, a PCMCIA card.

16. **(Original)** The optical transceiver as recited in claim 12, wherein the transceiver substrate defines front and rear sides, portions of the electronic circuitry being disposed on both the front and rear sides of the transceiver substrate.

17. **(Previously Presented)** The optical transceiver as recited in claim 12, wherein at least one of the transmit optical subassembly and the receive optical subassembly includes at least one electrical pin configured and arranged to be received in a corresponding electrical receptacle of the transceiver substrate.

18. **(Previously Presented)** The optical transceiver as recited in claim 12, wherein at least one of the transmit optical subassembly and the receive optical subassembly includes at least one electrical receptacle configured and arranged to receive a corresponding electrical pin of the transceiver substrate.

19. **(New)** The optoelectronic interface device as recited in claim 6, wherein the connector of the optical transceiver is electrically connected to the host bus adapter, the printed circuit board of the host bus adapter residing in a plane that is perpendicular to the plane of the transceiver substrate and parallel to the longitudinal axis of each of the transmit optical subassembly and the receive optical subassembly.